



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,914	09/20/2002	Arne Stavland	2002-0417A	2771
513	7590	05/17/2006	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P.			TUCKER, PHILIP C	
2033 K STREET N. W.			ART UNIT	
SUITE 800			PAPER NUMBER	
WASHINGTON, DC 20006-1021			1712	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/088,914

Applicant(s)

STAVLAND ET AL.

Examiner

Philip C. Tucker

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 31-38 and 40-68 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 31-38 and 40-68 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 50-57 and 63-68 are rejected under 35 U.S.C. 102(e) as being anticipated by Quintero (6204224).

Quintero teaches a water in oil emulsion comprising an aqueous gellant emulsified in oil, wherein the level proportions of water, polymer and oil within the scope of the present invention (Tables I-III and column 3, lines 39-43). Such would inherently reduce water permeability more than oil permeability, and break within the same time frame as in claim 48.

3. Claims 50-57 and 63-68 are rejected under 35 U.S.C. 102(b) as being anticipated by Phillips (4284304).

Phillips teaches a water in oil emulsion comprising an aqueous gellant emulsified in oil, wherein the level proportions of water and oil within the scope of the present invention, and of polymer as low as 5% of the aqueous phase (see abstract and column 5, lines 44-63). The emulsion is used in subterranean formations. Such would inherently reduce water permeability more than oil permeability, and break within the same time frame as in claim 48.

4. Claims 50-57 and 63-68 are rejected under 35 U.S.C. 102(b) as being anticipated by Bleeker (4670550).

Bleeker teaches a water in oil emulsion comprising an aqueous gellant emulsified in oil, wherein the level proportions of water and oil within the scope of the present invention, and of polymer as low as 1% of the aqueous phase (see column 1, lines 66-column 2, line10). The emulsion is used in subterranean formations (column 1, lines 12-16). Such would inherently reduce water permeability more than oil permeability, and break within the same time frame as in claim 48.

5. Claims 50-56 and 63-68 are rejected under 35 U.S.C. 102(b) as being anticipated by Dawson (5735349).

Dawson teaches a water in oil emulsion comprising an aqueous gellant emulsified in oil, used in a process of reducing water permeability, wherein the level proportions of water and oil within the scope of the present invention (see Examples 1 and 2). Such would inherently break within the same time frame as in claim 48.

Dawson teaches that the emulsion reduces water permeability greater than oil permeability.

6. Claims 50-57 and 61-68 are rejected under 35 U.S.C. 102(e) as being anticipated by Sunde (5919739).

Sunde teaches a water in oil emulsion comprising an aqueous gellant emulsified in oil, wherein the level proportions of polymer, water and oil within the scope of the present invention (see column 2, lines 6-22). The emulsion is used in subterranean formations (column 1, lines 6-19). A crosslinker is included in the oil phase which anticipates claims 61 and 62. Such would inherently reduce water permeability more than oil permeability, and break within the same time frame as in claim 48.

7. Claims 31-38, 40-68 are rejected under 35 U.S.C. 102(e) as being anticipated by Le et al (6169058).

Le teaches a water in oil emulsion comprising an aqueous gellant emulsified in oil, wherein the level proportions of polymer, water and oil within the scope of the present invention (see column 6, lines 16-19 and Example 1). The emulsion is used in subterranean formations (column 1, lines 6-19). A crosslinker is included in the aqueous phase which can be a trivalent metal ion (column 14, lines 52-55). Such would inherently reduce water permeability more than oil permeability, and break within the same time frame as in claim 48.

Art Unit: 1712

8. Applicants arguments have been considered but are not deemed fully persuasive. With respect to claim 31, rejections are removed which do not teach the use of the crosslinking agents. With respect to Quintero, applicant has not shown why such polymer gelant should not reduce the water permeability more than the oil permeability. In forming the filter cake on the wall, water permeability is decreased. Under the conditions used, the emulsion must break in order to form the cake comprising polymer gel on the wall.

With respect to Phillips, the lack of the use of the term gelant cannot be seen as distinguishing. The polyacrylamide is notoriously known to form a gel in aqueous systems, and clearly would be a gelant. The making of the polymer indicates the formation of an emulsion of aqueous emulsion in an oil, which is used in a subterranean formation.

With respect to Bleeker, the "enhanced oil recovery" process is one in which the composition is introduced into the subterranean formation to increase the production of oil from the well, and thus increases the permeability of oil compared to water in the well, thus in effect reducing the water permeability more than the oil permeability.

With respect to Sunde, applicant has not shown that the plugging of the well will not reduce the water permeability more than the oil permeability, and clearly is within the scope of spent wells having more water production than oil production. The rejections are thus maintained.

With respect to Dawson, when the crosslinked polymer particles absorb water they form a gel, and are thus clearly a gelant. As such reduces water permeability more than oil permeability, no distinction is seen.

With respect to Le, the whole concept of the invention is to reduce water permeability (see abstract and whole document), when the fracture is formed. Fractures are used to increase oil production, with the fluid of Le used to control the production of water, from these new oil producing areas. The rejection is maintained.

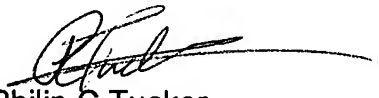
9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C. Tucker whose telephone number is 571-272-1095. The examiner can normally be reached on Monday - Friday, Flexible schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Philip C Tucker  
Primary Examiner  
Art Unit 1712

PCT-3969